

REMARKS

This Response makes editorial changes to claims 1-35 to eliminate preferred limitations and otherwise conform the claims more closely to U.S. practice. Claims 1-37 are pending.

Applicants provisionally elect Group II, claims 20-37, with traverse. The Restriction Requirement should be withdrawn because the claims define an inventive step over the cited combination of PCT Publication WO 1997/43567 to Ahola et al. in view of Daniluk et al., "Supercritical Extraction as a Method for Modifying the Structure of Supports and Catalysts," 63 React. Kinet. Cataly. Lett. 193 (1998), Kortesuq, "Sol-Gel Derived Silica Gel Monoliths and Microparticles as Carrier in Controlled Drug Delivery in Tissue Administration," Academic Dissertation, Division of Biopharmaceutics and Pharmacokinetics (Univ. Of Helsinki 2001), Rao et al., "Effect of Gel Parameters on Monolithicity and Density of Silica Aerogels, 26 J. Materials Sci. 3021 (1993), Pope et al., "Sol-Gel Processing of Silica II. The Role of the Catalyst," 87 J. Non-Crystalline Solids 185 (1986) and Siouffi, "Silica Gel-based Monoliths Prepared by the Sol-gel Method: Facts and Figures, 1000 J. Chromatography 801 (2003). With respect to non-elected Group I, the claimed process of making a SiO₂ monolith, coating or

particle requires preparing a sol with specified starting pH, molar ratio of water to alkoxide or inorganic silicate, and molar ratio of alcohol to alkoxide or inorganic silicate, followed by fast gel formation from the sol, either by forced drying or elevated temperature. It is not believed any of the cited references anticipate claim 1, and one of ordinary skill in the art has no motivation or apparent reason to combine their disclosures to reach the claimed process. For example, Rao et al. teach R values (water/TEOS molar ratio) lower than 4 will result in longer setting times and dense aerogels, thereby teaching away from the 0.5 to 2.5 R range of the claimed process. Moreover, the products of the claimed process (SiO_2 monoliths, coatings and particles) exhibit unexpectedly fast bioresorption rates which rebuts any prima facie case of obviousness. Reconsideration and withdrawal of the lack of unity restriction requirement are respectfully requested.

In response to the Election of Species Requirement, Applicants provisionally elect the species of invention wherein:

A. The specific embodiment is a sol-gel derived SiO_2 monolith, in which;

B.(2) A change or changes of sol composition are induced after sol ageing but before gel formation [alternative b)ii in claim 1],

(a) wherein the change or changes comprise the addition of a biologically active agent; and

(b) forced drying of the sol is initiated within 30 minutes from said induced change or changes of sol composition;

C. Wherein the method of forced drying is freeze-drying.

Claims 21, 27, 29 and 33-37 read on the elected species, with claims 21, 27, 29 and 33-37 generic thereto.

The fee for a two month extension of time is being paid electronically today. It is not believed any additional fee is required for entry and consideration of this Response. Nevertheless, the Commissioner is authorized to charge Deposit Account No. 50-1258 in the amount of any such required fee.

Respectfully submitted,

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Enclosure:
Petition for Extension of Time